

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- REVISED

PERMITTEE

Cardinal Health 200, Inc.  
Attn: Rose Kloet  
1300 Waukegan Road, Building MB  
McGaw Park, Illinois 60085-6724

<u>Application No.:</u> 92100072	<u>I.D. No.:</u> 097813AAG
<u>Applicant's Designation:</u> MCGAW FESOP	<u>Date Received:</u> June 5, 2006
<u>Subject:</u> Boilers, Diesel and Gas Generators, and Space/Water Heaters	
<u>Date Issued:</u> August 17, 2006	<u>Expiration Date:</u> December 30, 2007
<u>Location:</u> 1430 Waukegan Road, McGaw Park, Lake County, 60085	

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting five diesel-fired generators, one diesel-fired fire pump, four natural gas-fired generators, three natural gas-fired boilers with No. 2 fuel oil backup, sixty-two natural gas-fired space/water heaters, one natural gas-fired boiler, and fuel storage tanks pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for carbon monoxide, 100 tons/year for nitrogen oxides, 100 tons/year for sulfur dioxide, and 25 tons/year for volatile organic material). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
- b. Prior to the initial issuance and renewal of a FESOP to this source, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits for this location.
- 2a. Emissions of sulfur dioxide (SO<sub>2</sub>) from Boilers F1, F2, and F3 shall not exceed 0.3 lbs/mmBtu in any one hour period while burning distillate fuel oil, pursuant to 35 Ill. Adm. Code 214.122(b)(2).
- b. The Permittee shall not utilize distillate fuel oil (Grades No. 1 and 2) in the boilers with a sulfur content greater than the larger of the following two values pursuant to 35 Ill. Adm. Code 214:
  - i. 0.28 weight percent, or
  - ii. The wt. percent given by the formula: Maximum wt. percent sulfur = (0.000015) x (Gross heating value of oil, Btu/lb).

- c. Organic liquid by-products or waste materials shall not be used in these fuel combustion emission units without written approval from this Illinois EPA.
- d. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 3. Emissions of particulate matter (PM) from Boilers F1, F2, and F3 shall not exceed 0.1 lbs/mmBtu in any one hour period while burning fuel oil, pursuant to 35 Ill. Adm. Code 212.206.
- 4a. Operation and emissions of the three boilers with No. 2 fuel oil backup shall not exceed the following limits:
  - i. No. 2 fuel oil usage and combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and volatile organic material (VOM):

Fuel Usage		Pollutant	Emission Factor	Emissions	
(Gal/Mo)	(Gal/Yr)		(Lbs/Gal)	(Tons/Mo)	(Tons/Yr)
24,000	144,000	CO	0.005	0.1	0.4
		NO <sub>x</sub>	0.020	0.3	1.5
		PM	0.002	0.1	0.2
		SO <sub>2</sub>	0.0398	0.5	2.9
		VOM	0.0003	0.1	0.1

- ii. This table defines the potential emissions of CO, NO<sub>x</sub>, SO<sub>2</sub>, and VOM and is based on the maximum fuel usage and standard emission factors.
- b. Operation and emissions of the diesel generators and emergency fire pump shall not exceed the following limits:
  - i. Fuel usage, and No. 2 fuel oil combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM) sulfur dioxide (SO<sub>2</sub>), and volatile organic material (VOM):

Fuel Usage		Pollutant	Emission Factor	Emissions	
(Gal/Mo)	(Gal/Yr)		(Lbs/mmBtu)	(Tons/Mo)	(Tons/Yr)
21,050	126,300	CO	0.85	1.3	7.4
		NO <sub>x</sub>	3.2	4.6	27.7
		PM	0.1	0.2	0.9
		SO <sub>2</sub>	0.29	0.5	2.6
		VOM	0.1	0.2	0.9

- ii. This table defines the potential emissions of CO, NO<sub>x</sub>, SO<sub>2</sub>, and VOM and is based on the maximum fuel usage, the maximum operating

hours, a heat content of 136,065 Btu/gallon for No. 2 fuel oil, a sulfur content of 0.28% by weight and standard emission factors.

- c. Operation and emissions of the natural gas-fired generators shall not exceed the following limits:

- i. Operating hours, the firing rate, and natural gas combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volatile organic material (VOM) from Generator D1:

<u>Operating Hours (Hrs/Yr)</u>	<u>Rated Power (Hp)</u>	<u>Pollutant</u>	<u>Emission Factor (Lbs/Hp Hr)</u>	<u>Emissions (Lbs/Hr)</u>	<u>Emissions (Tons/Yr)</u>
288	365	CO	0.0035	1.3	0.2
		NO <sub>x</sub>	0.0260	9.5	1.4
		VOM	0.0016	0.6	0.1

- ii. Operating hours, the firing rate, and natural gas combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volatile organic material (VOM) from all other natural gas generators:

<u>Operating Hours (Hrs/Yr)</u>	<u>Total Rated Power (kW)</u>	<u>Pollutant</u>	<u>Emission Factor (Lbs/kW Hr)</u>	<u>Emissions (Lbs/Hr)</u>	<u>Emissions (Tons/Yr)</u>
288	760	CO	0.0047	3.7	0.6
		NO <sub>x</sub>	0.0355	27.0	3.9
		VOM	0.0004	0.4	0.1

- iii. These tables define the potential emissions of CO, NO<sub>x</sub>, and VOM and are based on the maximum rated power, the maximum operating hours, and standard emission factors.

- d. Operation and emissions of the natural gas-fired boilers, the natural gas-fired space/water heaters shall not exceed the following limits:

- i. Fuel usage and natural gas combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and volatile organic material (VOM):

<u>Fuel Usage (mmcf/Mo)</u>	<u>Usage (mmcf/Yr)</u>	<u>Pollutant</u>	<u>Emission Factor (Lbs/mmcf)</u>	<u>Emissions (Tons/Mo)</u>	<u>Emissions (Tons/Yr)</u>
165	994	CO	84	6.93	41.75
		NO <sub>x</sub>	100	8.25	49.70
		PM	7.6	0.63	3.78
		SO <sub>2</sub>	0.6	0.05	0.30
		VOM	5.5	0.45	2.73

- ii. This table defines the potential emissions of CO, NO<sub>x</sub>, SO<sub>2</sub>, and VOM and is based on the maximum fuel usage and standard emission factors.
- e. Compliance with annual limits shall be determined on a running total of 12 months of data.
- 5a. Within 90 days of a written request from the Illinois EPA, pursuant to 35 Ill. Adm. Code 201.282, the emissions of the, boilers firing No. 2 fuel oil, natural gas-fired boilers and space/water heaters, the diesel generators, and/or the natural gas-fired generators shall be measured by an approved testing service, during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.
- b. i. The following methods and procedures shall be used for testing of emissions. Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxides	USEPA Method 7
Carbon Monoxide	USEPA Method 10
Volatile Organic Material	USEPA Method 25, 25A if outlet VOM cont. < 50 as C Non CH <sub>4</sub>
- ii. A test shall consist of three separate runs each at least 60 minutes in duration. Compliance shall be determined from the average of the runs provided that the Illinois EPA may accept the arithmetic mean of the two runs in circumstances described in 40 CFR 60.8(f).
- c. Testing shall be performed by a qualified independent testing service.
- d. At least 30 days prior to the actual date of testing a written test plan shall be submitted to the Illinois EPA for review and approval. A copy shall also be submitted to the USEPA. The plan shall describe the specific procedures for testing, including:
  - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
  - ii. The conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum operating rate, the levels of operating parameters at or within which compliance is intended to be shown, if applicable,

and the means by which the operating parameters for the processes and any control equipment will be determined.

- e. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the tests. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- 6a. The Permittee shall maintain records of the following items for the source:
  - i. No. 2 fuel oil usage in the boilers, gallons/month and gallons/year (running total);
  - ii. No. 2 fuel oil usage in the diesel generators and emergency fire pump, gallons/month and gallons/year (running total);
  - iii. Hours of operation of the natural gas-fired generators, hours/month and hours/year (running total); and
  - iv. Natural gas usage in the boilers and space/water heaters, mmcf/month and mmcf/year (running total).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
- 7. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedances or violation and efforts to reduce emissions and future occurrences.
- 8. All reports, notification, etc., required by this permit shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and

Illinois Environmental Protection Agency  
Division of Air Pollution Control - Regional Office  
9511 West Harrison  
Des Plaines, Illinois 60016

- 9a. The Final Report(s) for all tests shall be submitted within 180 days after the date of the test. The Final Report shall include as a minimum:
- i. General information describing the test, including the name and identification of the emission source which was tested, date of test, name of personnel performing the tests, and Illinois EPA observers, if any;
  - ii. A summary of results;
  - iii. Description of test procedures, including description of sampling points, test equipment, and test schedule;
  - iv. Detailed description of test conditions, including:
    - A. Process information, i.e., process rate, aggregate type, fuel type, and firing rate.
    - B. Control equipment information, i.e., equipment condition and operating parameters during testing.
  - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- b. Submittals of information shall be made as follows:
- i. Notices of Test - one copy to the Compliance Unit and one copy to the Regional Office.
  - ii. Final Report - one copy to the Compliance Unit, one copy to the Regional Office, and one copy to the Permit Section.

Illinois Environmental Protection Agency  
Division of Air Pollution Control - Regional Office  
9511 West Harrison  
Des Plaines, Illinois 60016

Illinois EPA  
Bureau of Air  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

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Please note that this permit is revised to remove equipment no longer in service.

If you have any questions on this permit, please call German Barria at 217/782-2113.

Donald E. Sutton, P. E.02  
Manager, Permit Section  
Division of Air Pollution Control

DES:GB:psj

cc: Illinois EPA, FOS Region 1  
Illinois EPA, Compliance Section  
USEPA - Lotus Notes

Attachment A

This attachment provides a summary of the maximum emission from the source operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from the source. The resulting maximum emissions are below the levels, (e.g., 100 tons/year for carbon monoxide, 100 tons/year for nitrogen oxides, 100 tons/year for sulfur dioxide, and 25 tons/year for volatile organic material) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that control measures are more effective than required in this permit.

1. No. 2 fuel combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and volatile organic material (VOM) from the four boilers with No. 2 fuel oil backup:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
CO	0.1	0.4
NO <sub>x</sub>	0.3	1.5
PM	0.1	0.2
SO <sub>2</sub>	0.5	2.9
VOM	0.1	0.1

2. No. 2 fuel oil combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM) sulfur dioxide (SO<sub>2</sub>), and volatile organic material (VOM) from the diesel generators and emergency fire pump:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
CO	1.3	7.4
NO <sub>x</sub>	4.6	27.7
PM	0.2	0.9
SO <sub>2</sub>	0.5	2.6
VOM	0.2	0.9

- 3a. Natural gas combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volatile organic material (VOM) from Generator D1:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Lbs/Hour)</u>	<u>(Tons/Year)</u>
CO	1.3	0.2
NO <sub>x</sub>	9.5	1.4
VOM	0.6	0.1

- b. Natural gas combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and volatile organic material (VOM) from all other natural gas generators:



<u>Pollutant</u>	Emissions	
	<u>(Lbs/Hour)</u>	<u>(Tons/Year)</u>
CO	3.7	0.6
NO <sub>x</sub>	27.0	3.9
VOM	0.4	0.1

4. Natural gas combustion emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), and volatile organic material (VOM) from the natural gas-fired boilers, the natural gas-fired space/water heaters:

<u>Pollutant</u>	Emissions	
	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
CO	6.93	41.75
NO <sub>x</sub>	8.25	49.70
PM	0.63	3.78
SO <sub>2</sub>	0.05	0.30
VOM	0.45	2.73

5. Storage tank emissions of volatile organic material (VOM):

<u>Pollutant</u>	Emissions
	<u>(Tons/Year)</u>
VOM	0.8

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